National Nuclear Security Administration

Fact Sheet

U.S. Department of Energy **www.nnsa.doe.gov** **Contact: NNSA Public Affairs (202) 586-7371**

NNSA: Working To Prevent Nuclear Terrorism

"The greatest threat before humanity today is the possibility of a secret and sudden attack with chemical, biological, radiological or nuclear weapons." – President George W. Bush, February 11, 2004

The Department of Energy's National Nuclear Security Administration (NNSA), which has unique expertise in nuclear weapons and nuclear material, plays a key role in the U.S. government's comprehensive effort to combat terrorism. Since the 9/11 terrorist attacks, NNSA has doubled spending on nuclear nonproliferation programs. NNSA works with over 100 countries to fight against nuclear proliferation and terrorism, and has successfully completed the following:

Secured Nuclear Material and Warheads

- Secured enough nuclear material for hundreds of warheads, by completing upgrades at more than 85 percent of the Russian nuclear warhead sites of concern, including all 39 Russian Navy nuclear sites and all 25 Russian Strategic Rocket Forces sites, with work underway at nine 12 th Main Directorate sites to be completed by the end of 2008.
- Secured 178 buildings containing hundreds of metric tons of weapons-useable Russian nuclear material at 11 Russian Navy reactor fuel sites, seven Rosatom Weapons Complex sites, six civilian (non-Rosatom) sites, and 12 Rosatom civilian sites.
- Secured 15 nuclear material buildings outside of Russia.
- Returned almost 510 kilograms (enough for over 20 nuclear weapons) of Soviet-origin highly enriched uranium from vulnerable sites around the world.
- Returned 1,140 kilograms (enough for over 45 nuclear weapons) of U.S.-origin highly enriched uranium.
- Removed over 140 kilograms (enough for five nuclear weapons) of other highly enriched uranium from vulnerable sites around the world.
- Converted into low enriched uranium almost 10 metric tons of Russian excess highly enriched uranium (not from its weapons program).
- Helped to eliminate Libya's nuclear weapons program by removing 1.8 metric tons of uranium hexafluoride and over 500 metric tons of centrifuge components and related materials.
- Reached agreement with Russia on principles to sustain security upgrades after 2012, when Russia assumes full responsibility for security for its own sites.
- Achieved nearly 75 percent completion towards shutting down two of the last three remaining Russian weapons-grade plutonium production reactors by the end of 2008, and nearly one third completion toward shutting down the last reactor by the end of 2010 – thus eliminating approximately 1.2 metric tons of plutonium production per year.

Protected "Dirty Bomb" Material

- Recovered over 15,500 radioactive sources in the United States, containing over 17,250 curies.
- Upgraded the physical security at 600 facilities around the world that contained vulnerable, high-risk radioactive material, containing over 9 million curies.

Safeguarded Research Reactors

- Converted 51 research reactors around the world from operating on highly enriched uranium to running on low enriched uranium.
- Shut down four highly enriched uranium civilian research reactors.

Provided Security-Related Training

- Trained over 500 foreign officials every year since the 9/11 terrorist attacks on how to physically protect nuclear material and facilities.
- Trained over 400 foreign officials on nuclear material control and accounting methods.
- Trained over 5,500 domestic and 7,200 international export control enforcement officials on strategic trade controls and identification of weapons of mass destruction-related goods since the 9/11 terrorist attacks.

Prevented Nuclear Smuggling and Transfer of Nuclear Expertise

- Emphasized long-term research efforts to develop improved technologies to detect weapons of mass destruction and nuclear proliferation around the world.
- Installed Megaports radiation detection equipment operational in 12 countries and with various stages of implementation in ports in 11 other countries, plus Taiwan.
- Equipped (by end of FY 2007) 150 sites with radiation detection equipment at international borders, airports and seaports in Russia, Greece, Georgia, Azerbaijan, Slovenia, Slovakia, Kyrgyzstan, Kazakhstan, Lithuania, Turkmenistan and Ukraine.
- Reached agreement with Russia to complete the installation of radiation detection equipment at all Russian border crossings by 2011 (6 years ahead of schedule), building on the 117 crossings already equipped.
- Facilitated nearly 5,000 jobs and engaged at least 16,000 former weapons of mass destruction scientists and engineers at 180 institutes across the former Soviet Union, and in Libya and Iraq.
- Completed over 7,300 reviews of export license applications/requests related to material, technology and equipment of weapons of mass destruction concern in 2006 alone.

Downblended or Disposed of Nuclear Material

- Monitored the downblending of over 300 metric tons (enough for 12,000 nuclear weapons) worth of Russian highly enriched uranium, which now provides 10 percent of U.S. electricity.
- Downblended more than 89 metric tons (enough for approximately 1,950 nuclear weapons) of surplus U.S. highly enriched uranium into low enriched uranium for peaceful use as nuclear reactor fuel, with an additional 10.6 metric tons packaged and shipped for downblending (total of over 100 metric tons). Agreed to dispose of 68 metric tons (enough for 17,000 nuclear weapons) of U.S. and Russian weapon-grade plutonium by converting it into mixed-oxide fuel for commercial nuclear power reactors, and also began construction of the U.S. Mixed Oxide Fuel Fabrication Facility.

Maintained Leading Emergency Response Capabilities and Training

NNSA has robust emergency capabilities with some of the world's top professional scientists, engineers, pilots, medical personnel, technicians and other leading nuclear experts. Using extremely sophisticated laboratories and equipment, NNSA teams are ready to respond to and resolve nuclear and radiological terrorist incidents, including supporting other government agencies, and deploying search, analysis and medical teams.

- NNSA participated in 21 national-level exercises in 2006 to maintain its elite response standards.
- NNSA supported local law enforcement by mobilizing resources for 19 high profile special events and 72 emergency responses around the country in 2006.
- NNSA worked with emergency response organizations in over 39 countries and 9 international organizations to address radiological emergencies and nuclear incidents. The international cooperation involves technical exchanges, mutual training events, jointly conducted exercises and emergency management assistance.